Attorney Docket No.: A-69850-1/DJB/RMS/DCF



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

FAN et al.

Serial No. 09/779,202

Filed: February 7, 2001

For: **NUCLEIC ACID DETECTION**

METHODS USING UNIVERSAL

PRIMING

Examiner: NOT YET ASSIGNED

Group Art Unit: 1645

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Signed:

Dated:

Christine P. Peters

<u>INFORMATION DISCLOSURE STATEMENT AND</u> STATEMENT OF RELATEDNESS

Assistant Commissioner for Patents Washington, DC 20231

Sir:

In satisfaction of the duty of disclosure under 37 C.F.R. § 1.56, and in accordance with the provisions of 37 C.F.R. §§ 1.97 and 1.98, Applicant wishes to draw the attention of the U.S. Patent and Trademark Office to the references cited on the accompanying form PTO-1449. Copies of the documents are enclosed herewith.

With respect to patent applications, the applicants point out their duty under M.P.E.P. §2001.06(b) to disclose relevant patent applications of which they are aware. To this end, the applicants draw the Examiner's attention to the following patent applications:

1. U.S.S.N. 08/944,850, filed October 6, 1997; U.S.S.N. 09/287,573, filed April 6, 1999.

Serial No.: 09/779,202 Filed: February 7, 2001

2. U.S.S.N. 08/818,199, filed March 24, 1997, now Patent No. 6,023,540; U.S.S.N. 09/151,877, filed September 11, 1998; U.S.S.N. 09/786,896, filed September 10, 1999; U.S.S.N. 09/450,829, filed November 29, 1999; U.S.S.N. 09/816,651, filed March 23, 2001; U.S.S.N. 09/840,012, filed April 20, 2001.

- 3. United States Serial Number 09/189,543, filed November 10, 1998; U.S.S.N. 09/344,526, filed June 24, 1999; U.S.S.N. 09/748,706, December 22, 2000.
- 4. U.S.S.N. 09/256,943, filed February 24, 1999; U.S.S.N. 09/473,904, filed December 28, 1999; U.S.S.N. 09/606,369, filed June 28, 2000.
- 5. U.S.S.N. 09/553,993, filed April 20, 2000; U.S.S.N. 09/556,463, filed April 21, 2000.
- U.S.S.N. 09/425,633, filed October 22, 1999; U.S.S.N. 09/535,854, filed March 27,
 2000.
 - 7. U.S.S.N. 09/517,945, filed March 3, 2000.
 - 8. U.S.S.N. 09/513,362, filed February 25, 2000.

None of the foregoing references are believed to disclose the invention as claimed.

Nothing herein shall constitute an admission concerning the contents of any of the cited references, nor shall the inclusion of a reference herein be considered an admission that the reference constitutes prior art against the invention claimed in the above-identified application. Submission of the present document shall not be construed as an admission that a search has been made or that better art does not exist.

This Information Disclosure Statement is being filed within three months of the filing date of a national application, within three months of the date of entry of a national stage, or

Serial No.: 09/779,202 Filed: February 7, 2001

before the mailing date of a first Office Action on the merits. 37 C.F.R. § 1.97(b), and therefor no fee is required. The Commissioner is authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 06-1300 (Our Order No. A-69850-1/DJB/RMS/DCF).

Respectfully submitted,

FLEHR, HOHBACH, TEST, ALBRITTON & HERBERT

Dated: 11/1/3 (-2:11

David C. Foster Reg. No. 44,685

Four Embarcadero Center Suite 3400 San Francisco, CA 94111-4187 Telephone: (415) 781-1989 1053428 APR 7 2 2003

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 1 of 6

Complete if Known							
Application Number	09/779,202						
Filing Date	February 07, 2001						
First Named Inventor	JIAN-BING FAN et al.						
Group Art Unit	1645	<u></u>					
Examiner Name	NOT YET ASSIGNED						
Attorney Docket Number	A-69850-1/DJB/RMS/DCF						

				U.S. PATENT DOC	UMENTS	
Examiner Initials*	Cite No.1	U.S. Patent Doo	Name of Patentee or Applica		Date of Publication of Cited Document	Pages, Columns, Lines, Where Relevant
nii dui s			Kind Code ² (if known)	of Cited Document	MM-DD-YYYY	Passages or Relevant Figures Appear
	1	4,200,110		Peterson et al.	4/1980	
/	2	4,499,052		Fulwyler	2/1985	
/	3	4,682,895		Costello	7/1987	
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	16	EP	0 269 764			6/1988		
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	21	WO	93/02360			2/1993		
	22	WO	96/03212			2/1996		1
	2 3	WO	97/14028			4/1997		
/	24	WO	97/14928			4/1997		+-
V	25	WO	97/40385			10/1997		
	26	WO	98/40726			9/1998		

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¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English Language Translation is attached.

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			nd Code ² f known)	of Cited Document	MM-DD-YYYY	Passages or Relevant Figures Appear
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Initials*	No.	Office ³	Kind Code ² Number ⁴ (if known)	Name of Patentee or Applicant of Cited Document	Cited Document MM-DD-YYYY	Where Relevant Passages or Relevant Figures Appear	Té
	44	WO	98/50782		11/1998		
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<u> </u>	46	WO	98/53300		11/1998		
	47	WO	99/18434		4/1999		
<u></u>	48	WO	99/60170		11/1999		
	49	WO	99/67414		12/1999	··	
	50	WO	99/67641		12/1999		
/	51	WO	00/04372		1/2000		
	52	WO	00/13004		3/2000		1

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First Named Inventor	ЛАN-BING FAN et al.	•				
Group Art Unit	1645					
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Attorney Docket Number	A-69850-1/DJB/RMS/DCF					

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		Number	Kind Code ² (if known)	of Cited Document	MM-DD-YYYY	Passages or Relevant Figures Appear
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	54	5,575,849		Honda et al.	11/1996	
-V	55	5,633,972		Walt et al.	5/1997	
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	57	5,656,241		Seifert et al.	8/1997	· · · · · · · · · · · · · · · · · · ·
	58	5,690,894		Pinkel et al.	11/1997	
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		Office ³	Number ⁴	Kind Code ² (if known)	Name of Patentee or Applicant of Cited Document	Cited Document MM-DD-YYYY	Where Relevant Passages or Relevant Figures Appear	T ⁶
	69	WO	00/16101			3/2000		
<u> </u>	70	WO	00/39587			7/2000		
	71	WO	00/47996			8/2000		
	72	WO	00/48000			9/2000		
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	75	WO	00/71995			11/2000		1
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Application Number 09/779,202					
Filing Date	February 07, 2001				
First Named Inventor	JIAN-BING FAN et al.				
Group Art Unit	1645				
Examiner Name	NOT YET ASSIGNED				
Attorney Docket Number	A-69850-1/DIB/RMS/DCF				

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	77	6,013,456		Akgavan-Tafti	01/2000	<u> </u>
·	78	6,051,380		Sosnowski et al.	04/2000	
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	82	5,854,033		Lizardi	12/1998	
<u> </u>	83	5,554,516		Kacian et al.	09/1996	
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	85	5,660,988		Duck et al.	08/1997	
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Examiner Initials*	Cite No. ¹	Foreign Office ³	Foreign Patent Document Kind Code ² Office ³ Number ⁴ (if known)		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	Té	
	86	WO	98/13523			Pyrose Quencing AB	04/1998		
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Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English Language Translation is attached.

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February 07, 2001

09/779,202

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

First Named Inventor ЛАN-BING FAN et al. **Group Art Unit** 1645 (use as many sheets as necessary) **Examiner Name NOT YET ASSIGNED**

Application Number

Filing Date

Sheet of 6 5 **Attorney Docket Number** A-69850-1/DJB/RMS/DCF

	1	OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS	_
Examiner Initials*	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	ו
	87	Abel et al., "Fiber-Optic Evanescent Wave Biosensor for the Detection of Oligonucleotides," Anal. Chem. 68:2905-2912 (1996).	
	88	Anonymous, "Microsphere Selection Guide," Bandg Laboratories, (Fisher, In) September 1998.	T
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	91	Barnard et al., "A Fibre-Optic Chemical Sensor with Discrete Sensing Sites," Nature, 353:338-340 (September 1991).	
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Examiner Signature	Date Considered	

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	of	6	Attorney Docket Number	A-69850-1/DJB/RMS/DCF	

Application Number

	<u>r</u>	OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
<u>.</u>	106	Michael et al., "Making Sensors out of Disarray: Optical Sensor Microarrays," Proc. SPIE, 3270: 34-41 (1998).	
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	109	Mignani, et al., "In-Vivo Biomedical Monitoring by Fiber-Optic Systems," Journal of Lightwave Technology, 13(7): 1396-1406 (1995).	
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	119	Metzker et al., "Termination of DNA synthesis by novel 3'-modified-deoxyribonucleoside 5'-triphosphates," Nucleic Acids Research, 22(20):4259-4267 (1994).	
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				Application Number	09/779,202	
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		Number	Kind Code ² (if known)	or chod Boodinent	Cited Document MM-DD-YYYY	Passages or Relevant Figures Appear
	1	5,494,810		Barany et al.	02/1996	
	2	5,604,097		Brenner	02/1997	
	3	5,632,957		Heller et al.	05/1997	
	4	5,763,175		Brenner	06/1998	
	5	5,780,231		Brenner	07/1998	
	6	5,795,714		Cantor et al.	08/1998	
	7	5,830,711		Barany et al.	11/1998	
	8	5,976,797		Mitsuhashi	11/1999	
	9	6,027,889		Barany et al.	02/2000	
	10	6,054,564		Barany et al.	04/2000	
	11	6,096,496		Frankel	08/2000	
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		Office ³	Number ⁴ (if ka	l Code² nown)	of Cited Document	Cited Document MM-DD-YYYY	Where Relevant Passages or Relevant Figures Appear	T
	12	wo	93/25563	A1	City of Hope	12/1993		
_	13	WO	94/02515	A1	Bunsen Rush Laboratories Inc.	02/1994		
-	14	WO	95/21271	A1	Molecular Tool Inc.	08/1995		
	15	WO	95/16918	A1	Combichem Inc.	06/1995		
	16	WO	96/15271	A1	Abbott Laboratories	05/1996		
	17	WO	96/30392	Al	Ciba-Geigy AG	10/1996		
	18	WO	97/31256	A2	Cornell Research Foundation, Inc.	08/1997		
	19	WO	97/45559	Al	Cornell Research Foundation, Inc.	12/1997		

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0	STATEMENT E	Y APPLICANT	First Named Inventor	FAN et al.
	A		Group Art Unit	1645
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	Cite	I II C Dodge of F		U.S. PATENT DOC	UMENTS	
Examiner Initials*	No.1	U.S. Patent I	Kind Code ² (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant
/		6,251,639		Kurn	06/2001	Figures Appear
	21 22	6,268,148 6,274,323		Barany et al. Bruchez et al.	07/2001	
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	24	WO	97/46704	Al	Lynx Therapeutics Inc.	12/1997	Figures Appear	1
	25	WO	98/04746	Al	Mount Sinai School of Medicine of the City University of New York	02/1998		
	26	WO	98/13523	A1	Pyrose-Quencing AB	04/1998		_
	27	WO	98/31836	A1	Hyseq Inc.	07/1998		
	28	WO	99/39001	A2	Amersham Pharmacia Biotech	08/1999		-
	29	WO	99/64867	A1	Amersham Pharmacia Biotech	12/1999	<u> </u>	+
	30	WO	00/58516	A2	whitehead Institute for Biomedical Research	10/2000		+
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INFORMATION DISCLOSURE	Application Number Filing Date	09/779,202
ESTATEMENT BY APPLICANT	First Named Inventor	February 07, 2001 FAN et al.
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	Attorney Docket Number	A-69850-1/DJB/RMS/DCF
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_	33	Lizardi et al., "Mutation detection and single-molecule counting using isothermal rolling-circle amplification," Nature Genetics, 19: 225-232 (July 1998).	
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		Syvanen, Anne-Christine. "From gels to chips: "Minisequencing" Primer Extension for Analysis of Point Mutations and Single Nucleotide Polymorphisms," Human Mutation, 13:1-10 (1999).	
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			Number	Kind Code ² (if known)	of Cited Document	Cited Document MM-DD-YYYY	Where Relevant Passages or Relevant Figures Appear
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L	/	2	5,604,097		Brenner	02/1997	
_		3	5,632,957		Heller et al.	05/1997	
	_	4	5,763,175		Brenner	06/1998	
L	-	5	5,780,231		Brenner	07/1998	
	_	6	5,795,714		Cantor et al.	08/1998	
	_	7	5,830,711		Barany et al.	11/1998	
		8	5,976,797		Mitsuhashi	11/1999	
		9	6,027,889		Barany et al.	02/2000	
		10	6,054,564		Barany et al.	04/2000	
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-	13	WO	94/02515	A1	Bunsen Rush Laboratories Inc.	02/1994		1
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1	21	6,268,148	B1	Barany et al.	07/2001	
	22	6,274,323	B1	Bruchez et al.	08/2001	
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1	25	WO	98/04746	Al	Mount Sinai School of Medicine of the City University of New York	02/1998		
	26	wo	98/13523	A1	Pyrose-Quencing AB	04/1998		-
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	28	WO	99/39001	A2	Amersham Pharmacia Biotech	08/1999		+
_	29	WO	99/64867	Al	Amersham Pharmacia Biotech	12/1999		
	30	WO	00/58516	A2	whitehead Institute for Biomedical Research	10/2000		
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	33	Lizardi et al., "Mutation det amplification," Nature Gene	tection and single-	molecule counting us	sing isothermal rolling-circle	\dashv		
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